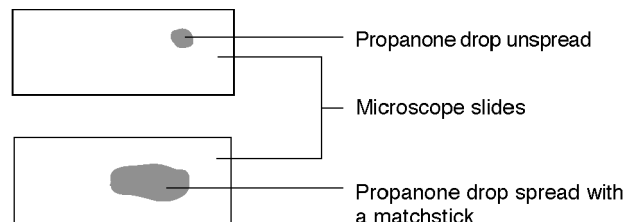


IGCSE chemistry section 1a

rate of evaporation

Introduction

Evaporation is the conversion of a liquid into vapour, without necessarily reaching the boiling point. In this experiment the rate of evaporation is measured and compared under various different conditions.



What to record

Complete the following table.

Condition	Evaporation time (s)
Unspread, cool, air movement	
Unspread, cool, no air movement	
Spread out, cool, no air movement	
Spread out, warm, no air movement	
Unspread, warm, air movement	
Spread out, cool, air movement	
Spread out, warm, air movement	
Unspread, warm, no air movement	

What to do

1. Consider the following conditions for the evaporation of a drop of propanone on a microscope slide.

Condition	How achieved
Warm	Warm slide in hands and hold on a flat palm. Alternatively, place the slide in warm water then dry the slide.
Cool	Room temperature.
Spread out drop	Spread the drop of propanone on the slide with a matchstick.
Unspread	Drop left as one drop on the slide.
Cool air flow	Fan with book.
Warm air flow	Blow across drop.

2. Place a microscope slide in one of the conditions listed.
3. Add the single drop of propanone.
4. Measure the time for the drop to evaporate.
5. Repeat the experiment using different conditions.

Safety

Ensure there are no sources of ignition nearby. Wear eye protection.

Questions

1. Name three factors that effect the rate of evaporation.
2. Why does evaporation produce a cooling effect?